HONEYWELL COMMERCIAL FIRE/BURG PANEL UL LISTING REQUIREMENTS

(Compiled from VistaFBPT Installation Instructions 800-09617V1 Rev A 11/12)

UL864 (Commercial Fire) Compliance

General Requirements

The VISTA-128FBPT/VISTA250FBPT control panels provide features that allow the system to meet UL864 Commercial Fire requirements. To meet these requirements, follow the guidelines outlined in this section.

- The reporting of bypassed points to the central station must be enabled in Report Code Programming mode.
- Fire alarm notification circuits must be supervised (e.g., supervisory zones 970 and 971 for Bell 1 and Bell 2 outputs)
- Only one relay of the 4204CF can be programmed for a NAC. If the 4204CF relay is programmed as a NAC, the stop action must be programmed as a zone type 62, Bell 2 Timeout.
- Output devices are not intended for overriding automatic fire and building functions.
- Line cut detection must be enabled for both the main and backup phone lines (supervisory zones 974 and 975).
- · Access Control Devices cannot be used.
- Audio Alarm Verification Devices cannot be used.
- Remote downloading can only be performed if a service person is at the premises.
- All supervision zones for the polling loop, RF receivers, keypads, NAC outputs, and telephone lines that are used, must be enabled as zone type 19 (24-hour trouble).

Programming Field Settings for UL864 Compliance

This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values or not used at all as indicated below.

Program feature or option	Permitted in UL864? Y/N	Possible settings	Settings permitted in UL 864
*08 TEMPORAL SIREN PULSE	N	0 = disable 1 = enable	Not used at this time. Must be set to "0" (disable).
*13 BELL 1 TIMEOUT	Y	Enter 01-15 multiplied by 2 minutes. 00 = no timeout.	Must be set to "3" (Minimum of 6 minutes).
*14 RS232 comm.	N	0 = no 1 = yes	Must be set to "0".
*17 AC LOSS KEYPAD SOUNDING	N	0 = disable 1 = enable	Must be set to "1" (enabled).
*19 RANDOMIZE AC LOSS REPORT	Y	0 = within 2 minutes 1 = 10.40 minutes 2 = 1.3 hours 3 = 6.12 hours without Type 13, 1.3 hours with Type 13	Must be set to "2".
*20 TELEPHONE MODULE PHONE CODE	N	1-9 = first digit of access code * or # = second digit of access code (enter # +11 for "*", or # +12 for "#") To disable enter 00 for the 1st digit	Not Used. Must be set to "00".
*22 KEYPAD PANIC ENABLES (PARTITION SPECIFIC)	N	0 = disable 1 = enable	Must be set to "000" for partition 1 in fire systems.
*23 MULTIPLE ALARMS (PARTITION SPECIFIC)	N	0 = disable 1 = enable	Must be set to "1" (enabled).
*24 IGNORE EXPANSION ZONE TAMPER	N	0 = disable (tamper detection) 1 = enable (no tamper detection)	Must be set to "0" (enabled).
*26 INTELLIGENT TEST REPORTING	N	0 = disable 1 = enable	Must be set to "0" (disable).

Honeywell

*27 TEST REPORT INTERVAL	Y	Enter 0001-9999 for the test report interval in hours. Enter 0000 for test reporting.	Must be set to "0024" (Maximum 24 hours)	
*28 POWER-UP IN PREV. STATE	Y	0 = disable 1 = enable	Must be set to "1" (enable).	
*37 DOWNLOAD COMMAND ENABLES	N	0 = disable 1 = enable	Must be set to "0" for all entries (disable).	
*41 NORMALLY CLOSED OR EOLR (ZONES 3-8)	N	0 = EOLR supervision 1 = N.C. loops	Must be set to "0" (EOLR Supervision).	
*42 DIAL TONE PAUSE	Y	Enter the wait time for dial tone detection: 0 = 5 seconds; 1 = 11 seconds; 2 = 30 seconds.	Must be set to "0" (5 seconds).	
*44 RING DETECTION COUNT	N	Enter 00 to disable ring detection. Enter 01-14 for ring could to 6 1-14. Enter 15 to select Answering Machine Defeat Mode	Must be set to "00" (disable).	
*56 DYNAMIC SIGNAL DELAY	Y	Enter 00-15 times 15 seconds.	Must be set to "6" (90 seconds).	
*77AUTO TRBL RSTR	Y	0 = disable 1 = enable	Must be set to "1" (enable).	
*80 ZONE TYPE 9 -10, 14 RESTORE	N	0 = disable 1 = enable	Must be set to "1" (enable) for zone type 9.	
*84 SWINGER SUPPRESS. (PARTITION – SPECIFIC)	N	Enter 01-14, Enter 00 for unlimited reports	Must be set to "00" (disable).	
1*12 PROGRAM NOTIFICATION	Y	0 = no 1 = yes	Must be set to "1" (yes).	
1*13 SYS. SENSOR REV. RELAY	N	0=use neither Zone 1 or Zone 2 inputs 1=use Zone 1 input; 2=use Zone 2 input; 3=use Zone 1 and Zone 2 inputs.		
1*18 AFFECTS LOBBY (PARTITION – SPECIFIC)	N	0 = disable 1 = enable	Must be set to "0" (disabled) for partition 1.	
1*19 ARMS LOBBY (PARTITION - SPECIFIC)	N	0 = disable Must be set to "0" (disable partition 1.		
1*22 thru 1*25 CROSS-ZONING PAIRS (1 – 4)	N	Enter 001-250 Must be set to "000,000" (di Enter 000,000 to disable for fire zones.		
1*28 RF TX LOW BATTERY SOUND	N	0 = disarmed state only 1 = both armed and disarmed states		
1*29 RF TX LOW BATTERY REPORTING	N	0 = disable 1 = enable	Must be set to "1" (enable).	
1*30 RF RCVR CHECK-IN INTERVAL	N	Enter 02-15 times 2 hours (4-30 hours) Enter 00 to disable receiver supervision Maximum is 02 (4 hours) for installations.		
1*31 RF TX CHECK-IN INTERVAL	N	Enter 02-15 times 2 hours (4-30 hours) Enter 00 to disable transmitter supervision Maximum is 02 (4 hours) for installations.		
1*35 ACS DLR ENABLES	N	0 = disable Not used. Must be set to "0". 1 = enable		
1*44 RF KEYPAD TAMPER DETECTION	N	0 = disable Not used. Must be set to "0". 1 = enable		
	3.7	0 = disable Must be set to "0" (disable) for		
1*45 EXIT DELAY SOUNDING (PARTITION SPECIFIC)	N		partition 1.	

Honeywell

1*49 SUPPRESS TX SUPERV. SOUND	N	0 = disable 1 = enable	Must be set to "0" (disable).	
1*53 DOWNLOAD CALLBACK	N	0 = callback required 1 = no callback required	Must be set to "0" (callback required).	
1*57 ENABLE 5800 RF BUTTON GLOBAL ARM	N	0 = disable 1 = enable	Must be set to "0" (disable).	
1*58 ENABLE 5800 RF FORCE ARM	N	0 = disable 1 = enable	Must be set to "0" (disable).	
1*60 ZONE 5/AUDIO ALARM VER.	N	0 = disable 1 = enable	Must be set to "0" (disable).	
1*72 PRINTER ON-LINE MODE	N	0 = disable 1 = enable	Not used. Must be set to "0".	
1*76 ACCESS RELAY # (PARTITION SPECIFIC)	N	01-96 = relay number 00 = relay not used.	Must be set to "00" (relay not used) for partition 1.	
1*78 EXT. HOME CONTROL EVT	N	1 = extended 0 = limited	Not used. Must be set to "0".	
1*79 HOME CONTROL EVENTS	N	0 = disable 1 = enable	Not used. Must be set to "0" in each entry.	
1*80 LOG-FAULTS & RESTORES	N	0 = disable 1 = enable	Not used. Must be set to "0".	
2*07AUTO-DISARM DELAY (PARTITION SPECIFIC)	N	00 = no delay. 01-14 times 4 minutes (04-56) delay. 15 = no auto disarming.	Must be set to "15" (no auto disarming) for partition 1.	
2*18 ENABLE GOTO FOR PARTITION (PARTITION SPECIFIC)	N	0 = disable 1 = enable	Must be set to "0" (disable) for partition 1.	
2*21 SUPERVISION PULSES FOR COMMUNICATIONS DEVICE	N	0 = disable 1 = enable	Not Used. Must be set to "00000" (disable).	
2*22 DISPLAY OTHER FIRE ALARMS (PARTITION SPECIFIC)	N	0 = disable 1 = enable	Must be set to "0" (disable) for partition 1.	
2*23 DISPLAY OTHER BURG & PANIC (INCLUDING CO ALARMS) (PARTITION SPECIFIC)	N	0 = disable 1 = enable	Must be set to "0" (disable) for partition 1.	
2*24 DISPLAY TROUBLES OF OTHER PARTITIONS (PARTITION SPECIFIC)	N	0 = disable 1 = enable	Must be set to "0" (disable) for partition 1.	
3*01 EVENT DISPLAY LOCK	N	0 = disable 1 = enable	Must be set to "1" (enable).	
3*12 ZN TYPE 18 DELAY USE	N	0 = disable 1 = enable	Must be set to "0" (disable).	
3*13 "SUPV" ON OPEN AND SHORT (APPLIES TO ZONE TYPE 18	N	0 = Trouble on open/Supv on short 1 = Supv on open/Supv on short Must be set to "0".		
3*14 W.F. ALARM SILENCE OPT.	N	0 = Silenced by User Code + OFF 1 = Silenced when zone restores	Must be set to "0" (Silenced by User Code + OFF).	
3*16 ZONE TYP 17/18 DLY	N	Enter 01-15 times 2 seconds Enter 00 for no delay Must be set to 00 (no delay).		
3*18 EXTENDED DLY FOR TYP 17/18	N	0 = no extended delay 1 = multiply delay by 4 Must be set to 0 (no extended delay		
3*20 TRIG OUTS FUNC SEL (ONLY APPLIES TO VISTA- 128FBPT)	N	0 = remote keypad sounder 1 = keyswitch LEDs Must be set to 0 (remote keypad sounder).		
3*21 MAX ATEMPTS	Y	1-8	Must be set at 3, 4 or 5.	



3*50 ZONE TYPES 16-18 REST.	N	0 = disable 1 = enable	Must be set to "1" (enable).
3*55 RESET ON 2 ND OFF FOR BELL 1	N	0 = disable 1 = enable	Must be set to "0" (disable).
3*56 RESET ON 2 ND OFF FOR BELL 2	N	0 = disable 1 = enable	Must be set to "0" (disable).
3*57 CONFIRM ARM BELL 2, AUX	N	0 = disable 1 = enable	Must be set to "0, 0" (disable).
3*59 CHIME ON BELL 2, AUX	N	0 = disable 1 = enable	Must be set to "0" (disable) if Bell 2 or Aux Relay is used for Fire.
3*60 BELL 2, AUX RLY TIMEOUT	Y	Enter 01-15 multiplied by 2 minutes. 00 = no timeout.	Must be set to "3" (Minimum of 6 minutes).
3*82 BURG FEATURES ENABLED	N	0 = disable 1 = enable	Must be set to "0" (disable).
RESTRICTION FOR FIRE RELAYS	Y	Yes No	Restriction for # 70 must be set to Yes when programming fire relays.

Use of Remote Interactive Service (Total Connect) is not permitted in UL installations.

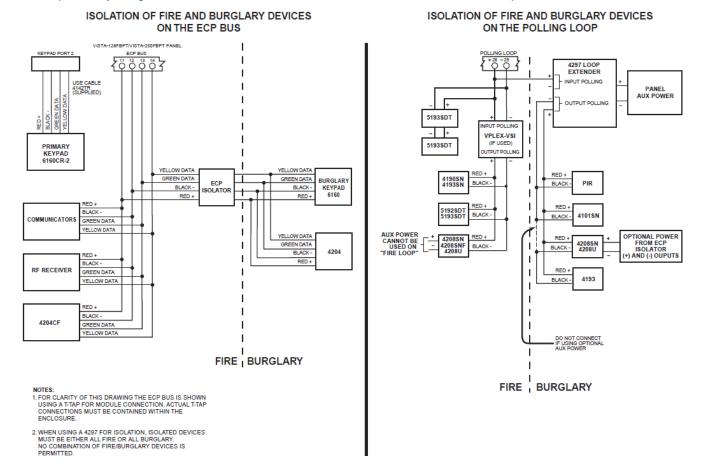
The access control function is not Listed for use in UL Installations.

Remote downloading is not permitted in UL installations. A technician must be on-site in order to test the system after any system programming is changed.

Commercial Fire Guidelines for mounting and wiring the control panel

- System components mounted inside the cabinet must be placed so that all power-limited wiring is separated from all non-power-limited wiring by ¼-inch (6.4mm).
- Non-power-limited wiring that exits the control panel (i.e., transformer wiring) must be run in conduit.
- All unused knockouts must be plugged. All wiring that exits the control panel must be strain-relieved (e.g., tie-wrapped).
- When the control's auxiliary power load for all devices exceeds 1A, you can power additional keypads from a regulated 12VDC power supply. Use a UL Listed, battery-backed supply for UL installations. For fire applications, the power supply must be UL1481 Listed.
- For UL commercial fire and burglary installations, no more than one wire per terminal may be connected. Use only 14-22AWG wire.
- A Commercial Fire Listed 24VDC Power Supply may be used to power 24V notification appliances.
- For commercial fire installations, the primary fire keypad must be installed on panel Keypad Port 2 and mounted within 20 feet of the control panel. External wiring must be run in conduit. Additionally, you can install supplemental fire keypads and devices on ECP Port 1, using an ECP Isolator to separate all fire wiring from all burglary wiring. Fire keypads on Partition 1 must be RED (6160CR2).

• The Panel contains an ECP bus and a polling loop bus for connecting Fire and Burglary devices. When installing both Commercial Fire and Burglary devices, all Fire devices must be isolated from the Burglary devices on each bus. This is accomplished by using an ECP isolator on the ECP bus, and a V-Plex VSI on the V-Plex loop.



Installing External Sounders (Notification Appliance Circuit or NAC)

- You may use a Commercial Fire Listed 24VDC Power Supply to convert one or both VISTA-128FBPT/VISTA-250FBPT 12VDC, 1.7A style-Y supervised Special Application Notification Appliance Circuits to 24V, style-Y supervised, Special Application Notification Appliance Circuits.
- Commercial fire alarm systems require Notification Appliance Circuits to be supervised.
- In Commercial Fire installations, the 4204CF cannot be used to drive sounders in the same audible area as sounders connected to the alarm outputs of the control panel.
- Notification Appliance Circuit outputs must be wired to a Sync Module if more than one device is used. Follow
 instructions provided with Sync Module. Be sure to use the compatible Sync Module for the Alarm Indicating Device
 selected. All visual notification appliances within the same physical area must be synchronized. A list of approved
 Sync Modules and Alarm Indicating devices can be found in the Installation Instructions.

ZONES (Initiating devices)

- All fire zones must be assigned to partition 1 to ensure that all Fire Test modes operate correctly
- A list of Compatible 2-wire smoke detectors can be found in the Installation Instructions. These smoke detectors are UL Listed for use with the Panel, and are the only 2-wire smoke detectors that may be used.
- Use any UL Listed 4-wire smoke detector that is rated for 12VDC operation and that has alarm reset time not exceeding 6 seconds.
- A combination of heat detectors and smoke detectors is not permitted on a zone programmed for fire verification.
- EOL resistors must be used on fire zones and must be connected across the loop wires of each zone at the last detector.
- Power to 4-wire smoke detectors must be supervised with an EOL device (use a System Sensor EOLR-1 EOL relay Module)

WIRELESS

- Receiver must be UL864 listed (5881EN, 5883H) and have Signal Sentry (dip switch #5 on).
- Receiver ECP run cannot be more than 20ft from the panel.
- Receivers must be supervised for deaf receiver and RF Jam (zone 990 and 988)
- Receiver ECP address must be supervised (Zone 8xx)

RELAYS

- The 4204, 4204CF, and/or 4101SN may be used as output devices.
- 4204 and 4204CF relays may be used to trigger auxiliary fire functions such as air handler shutdown, elevator recall, door-holder release, sound system shutdown, etc.
- For Commercial Fire installations, only one notification appliance module may be used, and only one notification appliance output (A or B) may be used on that module in a single audible/visual area.
- If the 4204CF relay is enabled for a NAC, it must follow the action of the NAC on the panel.
- Relays (aux and 4204's) cannot be used for off-premises signaling
- In Commercial Fire installations, the 4204CF cannot be used to drive sounders in the same physical area as sounders connected to the alarm outputs of the control panel.
- Output devices are not intended for overriding automatic building and fire functions.

CONNECTING THE TRANSFORMER

To connect the 1451 transformer to the control, perform the following steps:

- 1 Remove the front cover of the enclosure.
- 2 Mount the enclosure to the wall near the VISTA-128FBPT/VISTA-250FBPT control panel. The enclosure has four mounting holes on its back surface for this purpose.
- 3 Run 120VAC wiring to the enclosure in conduit. A dedicated circuit must be used.
- 4 Use wire nuts to splice the 120VAC wires to the transformer's white and black primary leads.
- 5 Connect the earth ground post on the back of the enclosure to a good earth ground.
- 6 Run 16AWG wire in conduit from the enclosure to the control panel.
- 7 Use wire nuts to splice the transformer blue 18VAC secondary leads to the 16AWG wire. Connect the 16AWG wire at the control panel to terminals 1 and 2.
- 8 Replace the front cover of the enclosure and fasten it with the screws supplied.
- Use wires having insulation rated for at least 90°C operation and suitable for non-power limited applications.
- Use care to keep 18VAC wiring separated from all other wiring inside the control panel's enclosure. This must be done by running non-power-limited 18VAC wiring into the control panel's enclosure via one of the knockouts on the left-hand side, and then tie-wrapping these wires to the tie-wrap loops located near the knockout.

KEYSWITCH

In Commercial Fire installations, mount the keyswitch next to the primary keypad on keypad port 2 (J4 header) and
wire in conduit within the same room as the control panel. The keypad displays the UL-required "ALARM SILENCED"
when the keyswitch is used to silence a fire alarm.

Earth Ground Connections

In order for the lightning transient protective devices in this product to be effective, the designated earth ground terminal (terminal 30) must be terminated in a good earth ground. Recommended wire gauge for the ground connection is #16 AWG, run no farther than 30 feet.

- Connect the earth ground post inside the 1451 enclosure to a good earth ground (use grounding methods specified in the National Electric Code).
- Use a green nut (supplied) to secure the wire to the ground post. The ground wire should be the only wire under this nut.
- Run a 16AWG wire from the ground post to the panel's earth ground terminal (30). Use a second green nut (supplied) to secure this wire to the ground post. This connection avoids ground loops that may occur when the 1451 and panel are connected to different earth ground systems.

Battery Backup

The battery's capacity must be sized to provide 24 hours (central station fire) followed by 5 minutes (fire only) or 15 minutes (fire and burglary) alarm time.

Battery Capacity must be able to satisfy the Standby and Alarm periods in the chart below dependant on Control Panel usage.

Control Panel Use	Standby Period	Alarm Period	Battery Capacity*
Residential Burg	4 hours	4 minutes	
Commercial Burg	4 hours	15 minutes	
Commercial Burg – Bank Safe and Vault	72 hours	15 minutes	
Commercial/Residential Fire	24 hours	5 minutes	
Canadian Commercial Fire	24 hours	30 minutes	
Proprietary Burg Central Station Receiver	24 hours		_

Determine the required capacity for the backup battery by using the Battery Capacity Calculation Worksheet following the other worksheets if using non-Commercial Fire Listed Power Supply, or use the instructions included with the power supply if using a Commercial Fire Listed Power Supply.

UL864/NFPA Central Station and Remote Station Fire

- 1. Size the backup battery for 24-hour standby time.
- 2. For central station service, you may use the 7845i-ent, 7847i, or IGSMV/IGSMHS communications device alone, the main dialer with a communications device, or the main dialer with the 5140DLM Backup Dialer Module. For remote station service, you must use the main dialer with the 5140DLM Backup Dialer Module.
- 3. When the main dialer is used, enable it (field 3*30) and connect it to a telephone line. Assign a 24-hour trouble response (type 19) to system Zone 974 to enable main dialer supervision. The control panel will activate the trouble trigger when it detects a main dialer supervision fault.
- 4. When the backup dialer is used, install it on the control panel's PCB shield as indicated in the Summary of Connections diagram. Enable it (field 3*30) and connect it to a separate telephone line. Assign a 24-hour trouble response (type 19) to system Zone 975 to enable backup dialer supervision.
- 5. When the dialer is used, program it to send fire alarm, fire supervisory (if used), trouble, AC loss, low battery, normal dialer test, and off-normal dialer test reports. Field *27 must be set to "0024" maximum so that test reports are sent at least once every 24 hours.
- 6. If a secondary number is programmed, set the maximum number of dialer retries to 3, 4, or 5 in field 3*21.

UL Commercial Burg Requirements:

- Use of Remote Interactive Service (Total Connect) is not permitted in UL installations
- Remote downloading and auto-disarming are not UL Listed features.
- Vent zones cannot be used in UL installations.
- You must disable the Force Arm option (used in conjunction with the Arm w/Fault option)
- Quick Exit is not permitted for use in a UL commercial installation.
- Remote Downloading is not permitted in UL installations. A technician must be on-site in order to test the system after any system programming is changed.
- The panel door must be supervised. Mount the clip-on tamper switch (supplied) to the cabinet's right side wall and wire it to zone 6. Assign zone 6 to a burglary partition. Program it for day trouble/night alarm (zone type 5) when only one burglary partition is used. Program it for 24-hr. audible alarm (zone type 7) when more than one burglary partition is used. Enable field 3*17 so that the system responds to a ground fault in accordance with its zone type rather than a ground fault response.
- All wiring between the transformer and panel must be run in conduit.
- All unused knockouts must be plugged using the disc plugs and carriage bolts (supplied)
 Fasten the cabinet door to the cabinet backbox using the 15 one-inch-long Phillips-head screws (supplied) after all wiring, programming, and checkout procedures have been completed.

 For safe and vault installations, a shock sensor (not supplied) that is Listed for protection of sheet metal enclosures, as well as an additional Listed tamper switch, must be installed on the cabinet backbox to protect the cabinet from being removed from the wall. These devices must also be connected to zone 6.
- For UL commercial fire and burglary installations, no more than one wire per terminal may be connected. Use only 14-22AWG wire.
- Burglary Notification Appliance Circuits must be programmed for a timeout of 16 minutes or longer.
- Use only UL Listed sounding devices for UL installations
- The 5881ENHC RF Receiver, 5869 Holdup Switch Transmitter and 5817CB Wireless Commercial Household Transmitter are listed for UL Commercial Burglary applications. All other RF receivers and transmitters are not listed for UL Commercial Burglary applications.
- A UL-Listed remote keyswitch, such as the Honeywell 4146, can be used for remote arming/disarming of the burglary
 part of the system and for silencing alarms. For UL Commercial Burglary installations, the tamper switch must be
 wired to zone 6. Program zone 6 for Day Trouble/Night Alarm (response type 5). When the keyswitch is removed
 from the wall, the tamper switch opens, causing an alarm or trouble on the zone.

UL609 Local Mercantile Premises/Local Mercantile Safe & Vault

- 1. All zones must be configured for EOLR supervision (*41=0). If 4190SN V-Plex devices are used, set field *24 to "0" to enable tamper detection.
- 2. Attach a Listed door tamper switch to protect the cabinet door. Wire the selected device to Zone 6. Program this zone for day trouble/night alarm (type 05) or 24-hour audible alarm (type 07) response. The 24-hour alarm response must be used for multiple partitioned systems. Enable field 3*17 so that the system responds to a ground fault on that zone in accordance with the zone type rather than a ground fault response.
- 3. For safe and vault installations, a shock sensor (not supplied) that is Listed for protection of sheet metal enclosures, as well as an additional Listed tamper switch, must be installed on the cabinet backbox to protect the cabinet from being removed from the wall. These devices must also be connected to zone 6.
- 4. Entry delays must not exceed 45 seconds, and exit delays must not exceed 60 seconds.

CANADA ULC S527 (Commercial Fire) and ULC S304 (Commercial Burg)

Program feature or option	Possible settings	Settings permitted in ULC S304
*38 PREVENT ZONE XXX BYPASS (PARTITION SPECIFIC)	Enter a zone number (001-250). Enter 000 if all zones can be bypassed.	Must be set to "000" (all zones can be bypassed).
1*58 ENABLE 5800 RF FORCE ARM	0 = disable 1 = enable	Must be set to "0" (disable).
2*03 ULC S304 ENABLE	0 = disable 1 = enable	Must be set to "1" (enabled).
2*08 FORCE-ARM ENABLE (PARTITION SPECIFIC)	0 = disable 1 = enable	Must be set to "0" (disable).

- Wireless devices are not ULC Listed for and cannot be used in ULC Installations.
- Scheduling is currently not approved for ULC applications.
- Vent zones cannot be used in UL installations
- You must disable the Force Arm option (used in conjunction with the Arm w/Fault option), in ULC installations
- The 5140DLM Backup Dialer cannot be used for ULC fire installations.
- Remote Arming is not a ULC Listed feature.
- For ULC fire installations, Contact ID is the only permitted format.
- For ULC Commercial Fire Installations, the batteries' capacity must be sized for 24-hour Standby followed by a 30 minute Alarm